

CLAIMS

What is claimed is:

1. A method for treating a disease characterized by a constrictive airway
5 comprising administering to a patient in need thereof via inhalation a pharmaceutical composition comprising trospium, wherein said patient achieves an effective therapy for at least 10 hours.
2. The method of Claim 1 wherein said disease is chronic obstructive
10 pulmonary disease.
3. The method of Claim 1 wherein said composition comprises a dose of trospium of between about 50 to 1200 micrograms.
4. The method of Claim 1 wherein said composition comprises a dose of trospium of between about 200 to 800 mcg.
5. The method of Claim 1 wherein said composition comprises an
15 aqueous solution of trospium hydrochloride.
6. The method of Claim 1 wherein said composition comprises a particulate formulation comprising trospium.
7. The method of Claim 1 wherein said composition comprises a dry
20 particulate formulation of trospium wherein said formulation is administered with a dry powder inhaler.
8. The method of Claim 1 wherein said composition comprises a dry
particulate formulation of trospium characterized by a fine particle fraction of at least 50% and wherein said formulation is administered with a dry powder inhaler.
9. The method of Claim 8 wherein said trospium formulation comprises
25 micronized trospium.
10. The method of Claim 8 wherein said trospium formulation comprises spray dried trospium.
11. The method of Claim 10 wherein said trospium formulation has a tap
30 density of less than 0.4 g/cm³.

12. The method of Claim 11 wherein said trospium formulation has a mass mean aerodynamic diameter of less than 5 microns.
13. The method of Claim 12 wherein said trospium formulation further comprises leucine, a phospholipid or combinations thereof.
- 5 14. The method of Claim 13 wherein said formulation comprises at least about 70% by weight of leucine.
15. The method of Claim 14 wherein said formulation contains less than about 10% by weight of trospium.
- 10 16. The method of Claim 14 wherein said formulation comprises about 5% by weight trospium hydrochloride; between about 5 and 10% by weight of phospholipid and between about 85 and 90% by weight of leucine.
17. The method of Claim 16 wherein the dose of trospium administered is about 50 to 1200 mcg.
- 15 18. The method of Claim 16 wherein the dose of trospium administered is about 200 to 800 mcg.
19. The method of Claim 17 wherein the patient achieves an effective therapy for at least about 15 hours.
- 20 20. The method of Claim 17 wherein the patient achieves an effective therapy for at least about 24 hours.
21. The method of Claim 8 wherein the formulation is administered once per day.
22. The method of Claim 1 further comprising the administration of a second active agent.
23. The method of Claim 22 wherein the second active agent is a beta-2 agonist.
- 25 24. The method of Claim 23 wherein the second active agent is formoterol.
25. The method of Claim 23 wherein the second active agent is administered separately from the trospium formulation.
- 30 26. The method of Claim 24 wherein the second active agent is incorporated into the trospium formulation.

27. The method of Claim 24 wherein the composition comprises a spray dried formulation comprising trospium, formoterol, leucine and, optionally, a phospholipid.
28. A pharmaceutical composition for inhalation comprising trospium and formoterol.
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